ESOGÜ Mathematics and Computer Sciences
COURSE INFORMATION FORM

SEMESTER	Spring

COURSE CODE	821618010	**COURSE NAME**	Computer Graphics

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	**Practice**	**Labratory**	**Credit**	**ECTS**	**TYPE**	**LANGUAGE**
8	3	0	0	3	5	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATAGORY			
Mathematics	**Computer**	**Social Sciences**	
X	X		

ASSESSMENT CRITERIA			
	Evaluation Type	**Quantity**	**%**
MID-TERM	1st Mid-Term	1	40
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (………)		
FINAL EXAM		1	60

PREREQUIEITE(S)	None
COURSE DESCRIPTION	Concepts of computer graphics and it's tecniques, plane scan algorithms, Convex hulls, map overlay, art galery problem, triangulation of a polygon, casting problem, Orthogonal Range Searching, Point Location, Voronoi diagramları
COURSE OBJECTIVES	1. Students will understand geometric problems and computer graphics algorithms 2. Will be able to follow the developments in the field of computer graphics 3. Gain experience on computer graphic geographic information systems.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Gain analytical thinking and problem solving ability.
COURSE OUTCOMES	Being able to recognize and understand geometric algorithms in encountered problems
TEXTBOOK	Computational Geometry, Mark de Berg, Marc van Kreveld, Mark Overmars, Otfried Schwarzkopf, Springer
OTHER REFERENCES	Introduction to Data Structures, Bhagat Singh, Thomas L. Naps, West
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS

WEEK	TOPICS
1	Introduction to Computer graphic
2	Convex hulls
3	Network type map overlay
4	Planar region map overlay
5	Art galery problem
6	Polygon triangulation
7	Molding problem
8	Linear programming
9	Smallest Enclosing Discs
10	Orthogonal range searching
11	Point Location
12	Point Location
13	Voronoi Diagrams
14	Voronoi Diagrams
15,16	

NO	PROGRAM OUTCOMES	3	2	1
1	The ability to apply knowledges of Mathematics - Computer,		x	
2	To have sufficient theoretical and practical knowledge of Mathematics at international level,	x		
3	The ability of describing, modelling and solving of mathematical problems at Mathematics and related subjects,	x		
4	The skill to solve and design a problem process in accordance with a defined target,	x		
5	Skills to analyze data, interpret and apply to other datum and using these data on computer,		x	
6	The skill to use the modern techniques and computational tools needed for mathematical applications,		x	
7	The skill to make team work within the discipline and interdisciplinary,		x	
8	The ability to improve oneself by following the developments on other modern, scientific and technological subjects as well as Mathematics - Computer,		x	
9	The skill to communicate orally and in written way, in a clear and concise manner by having individual work skills and ability to independently decide and analytical thinking,		x	
10	The skill to have professional and ethical responsibility,		x	
11	The skill to have consciousness for quality issues and scientific research,		x	
12	The skill to be sensitive to environmental issues related with problems and development of living area and consistent in the social relations,			x
13	Ability to solve problems in the working life faced to find an appropriate algoritms via mathematical modeling and to write computer programs,		x	
14	The skill to developed design of software systems at different complex levels,			x
15	The credence of necessity of life-long learning and ability to apply the formation long-life learning.			x
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Prof. Dr. Özcan Gelişgen

Signature: **Date:**